

SUGIMOTO et al.
Appl. No. 10/642,237
November 19, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (CANCELED)
2. (CANCELED)
3. (CANCELED)
4. (CANCELED)
5. (CANCELED)
6. (CANCELED)
7. (CANCELED)
8. (CANCELED)
9. (CANCELED)

10. (Currently Amended) The mounting method according to claim 912, wherein said control of the load change and the time at which the required load is attained comprises substantially stabilizing the load change and the time at which the required load is attained.

11. (Currently Amended) The mounting method according to claim 912, wherein said control of the load change and the time at which the required load is attained comprises quantitative control to set the stretch amount at a desired value.

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12 (Currently Amended) ~~The mounting method according to claim 9, A mounting method of bonding by thermocompression with use of a heater head a display board and a flexible printed circuit board in such a way that a first terminal electrode row of said display board and a second terminal electrode row of said flexible printed circuit board are electrically connected, wherein a load change per unit of time after said heater head starts compressing said flexible printed circuit board as well as a time at which a required load is attained are controlled, so that a stretch amount of said second terminal electrode row caused by thermocompression is controlled, the method comprising:~~

a relative position determining step of determining a relative positional relationship between reference patterns formed on either side of said first terminal electrode row and a relative positional relationship between positioning patterns formed on either side of said second terminal electrode row;

a preliminary bonding step of preliminarily fixing a relative position of said heater head with respect to said flexible printed circuit board performed after said relative position determining step;

a regular bonding step performed after said preliminary bonding step;

a stretch amount calculating step of calculating the stretch amount of said second terminal electrode row based on information obtained from said relative position determining step; and

a correction amount calculating step of calculating a correction amount corresponding to a difference between stretch amounts of said first terminal electrode row and said second terminal electrode row based on the stretch amount of said second terminal electrode row; and

~~the a regular bonding step performed after said preliminary bonding step.~~

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13. (Currently Amended) ~~The mounting method according to claim 9~~ A mounting method of bonding by thermocompression with use of a heater head a display board and a flexible printed circuit board in such a way that a first terminal electrode row of said display board and a second terminal electrode row of said flexible printed circuit board are electrically connected, wherein a load change per unit of time after said heater head starts compressing said flexible printed circuit board as well as a time at which a required load is attained are controlled, so that a stretch amount of said second terminal electrode row caused by thermocompression is controlled, the method comprising:

a displacement amount detecting step of detecting a displacement amount of positioning patterns formed on either side of said second terminal electrode row with respect to reference patterns formed on either side of said first terminal electrode row;

a stretch amount calculating step of calculating the stretch amount of said second terminal electrode row based on said displacement amount; and

a correction amount calculating step of calculating a correction amount corresponding to a difference between stretch amounts of said first terminal electrode row and said second terminal electrode row based on the stretch amount of said second terminal electrode row, wherein quantitative control is performed by feeding back the correction amount.

14. (Previously Presented) The mounting method according to claim 13, comprising:

a preliminary bonding step of preliminary preliminarily fixing a relative position of said heater head with respect to said flexible printed circuit board;

said displacement amount detecting step being performed after said preliminary bonding step; and

a regular bonding step being performed after said displacement amount detecting step.

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15. (CANCELED)

16. (Currently Amended) ~~The mounting method according to claim 15~~ A mounting method of bonding by thermocompression a display board and a flexible printed circuit board by means of a heater head in such a way that a first terminal electrode row of said display board and a second terminal electrode row of said flexible printed circuit board are electrically connected, wherein a speed at which said heater head is moved toward said flexible printed circuit board is controlled, so that a stretch amount of said second terminal electrode row caused by thermocompression is controlled, the method comprising:

a relative position determining step of determining a relative positional relationship between reference patterns formed on either side of said first terminal electrode row and a relative positional relationship between positioning patterns formed on either side of said second terminal electrode row;

a preliminary bonding step of preliminarily fixing a relative position of said heater head with respect to said flexible printed circuit board performed after said relative position determining step;

a regular bonding step performed after said preliminary bonding step;

a stretch amount calculating step of calculating a stretch amount of said second terminal electrode row based on information obtained from said relative position determining step; and

a correction amount calculating step of calculating a correction amount corresponding to a difference between stretch amounts of said first terminal electrode row and said second terminal electrode row based on the stretch amount of said second terminal electrode row; and

~~—— a regular bonding step performed after said preliminary bonding step.~~

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17. (Currently Amended) ~~The mounting method according to claim 15~~ A mounting method of bonding by thermocompression a display board and a flexible printed circuit board by means of a heater head in such a way that a first terminal electrode row of said display board and a second terminal electrode row of said flexible printed circuit board are electrically connected, wherein a speed at which said heater head is moved toward said flexible printed circuit board is controlled, so that a stretch amount of said second terminal electrode row caused by thermocompression is controlled, the method comprising:

a displacement amount detecting step of detecting a displacement amount of positioning patterns formed on either side of said second terminal electrode row with respect to reference patterns formed on either side of said first terminal electrode row;

a stretch amount calculating step of calculating a stretch amount of said second terminal electrode row based on said displacement amount; and

a correction amount calculating step of calculating a correction amount corresponding to a difference between stretch amounts of said first terminal electrode row and said second terminal electrode row based on the stretch amount of said second terminal electrode row, wherein quantitative control is performed by feeding back the correction amount.

18. (Previously Presented) The mounting method according to claim 17, comprising:

a preliminary bonding step of preliminarily fixing a relative position of said heater head with respect to said flexible printed circuit board;

said displacement amount detecting step being performed after said preliminary bonding step; and

a regular bonding step being performed after said displacement amount detecting step.